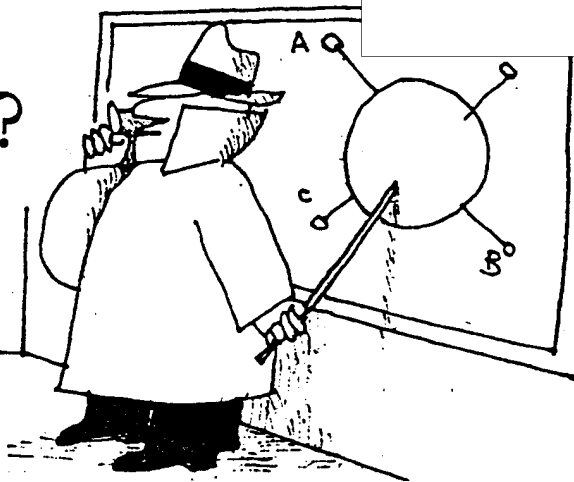
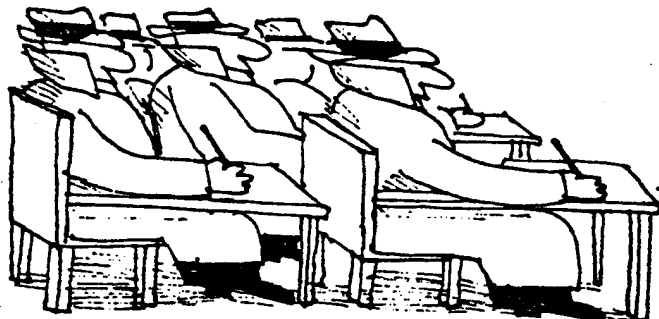


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Pssst! Want the Inside Scoop on C³I?



By WAYNE BIDDLE

Special to The New York Times

WASHINGTON, Aug. 1 — In a suburban shopping mall near Fairfax, Va., resides the world headquarters of the Armed Forces Communications and Electronics Association. Should the fancy strike this fall, you can take a \$510 three-day course sponsored by Afcea, as insiders call it, on military communications and cryptography. But only if you have a "secret" clearance, a "need to know" and are a citizen of the "Free World," according to brochures.

Since 1982 the association has offered classes in a field known as Command Control, Communications and Intelligence. The field, dubbed C³I — pronounced "see-cubed-eye" in language borrowed from high school algebra — is one of the fastest growing in the military-industrial establishment, as Pentagon planners give high priority to the problem of orchestrating the forces they have been buying off late.

Among the secret classes planned for September through December is "Military Data Communications," in which students will pick up tips about something identified by the unclassified course outline only as "The Crypto System." There will also be a five-day secret "Overview of C³I," which presumably covers lots of everything except I. About 30 percent of the students are members of the association active in the military or the Federal Government, 40 percent come from industry and the balance are nonmembers.

Expert on Communication

The programs are directed by Samuel L. Gravelly Jr., who retired in 1980 as director of the Defense Communications Agency after 38 years in the Navy, a career that included the dis-

tingtion in 1971 of becoming the first black appointed as an admiral. While heading the Federal agency, Admiral Gravelly oversaw all engineering in the vast communication network that links Washington with American and allied bases around the world.

In a recent interview, Admiral Gravelly described the association's courses as unique because of their "secret" clearance level. In a realm that thrives on privileged information, it also adds immeasurably to the cachet. Though these classes are usually held in "secure" Government or industry auditoriums, part of the association's complex at the mall boasts a "top secret" designation and houses a vault for storage of classified materials, he said. Visitors must be buzzed into the new California-style glass-and-wood building by a secretary in the lobby, but an average New Yorker might find the security system otherwise rather low-rent.

Afcea itself is a 37-year-old nonprofit, nongovernmental, nonlobbying professional association open to anyone "except from the Warsaw Pact," according to its president, Jon L. Boyes, also a retired admiral. In 1983 its revenues totaled nearly \$3.5 million from 24,000 dues-paying individuals and 446 corporate members around the world.

Besides supporting the growing educational program, budgeted at more than \$500,000 next year, and various expositions and symposiums, the association puts out a glossy magazine called Signal where such titles as "Electromagnetic Pulse: What It Is and What to Do About It" appear monthly.

Admiral Gravelly said the association had given 15 courses in C³I since 1982, of which 12 were secret. About a hundred students usually attend, and course fees are lower for Government employees and members of the association.

Broad Experience of Instructors

Instructors, who earn \$150 an hour plus expenses, are chosen from a wide range of disciplines, Admiral

Gravelly said. For example, a five-day secret course this fall on military satellite communications will be led by Harry Van Trees, executive vice president of Linkabit Inc. Mr. Trees has been Principal Deputy Assistant Secretary of Defense for C³I, chief scientist for the Air Force and a professor of electrical engineering at the Massachusetts Institute of Technology. The outline for his course, which costs \$850 to attend, includes study of satellite operation in a "jamming" and "nuclear environment." For a recent course called "Communications Security," the supersecret National Security Agency supplied instructors free of charge.

In order to cover such darksome topics, the association signed a contract with the Defense Communications Agency in 1982 that allows it to receive "various classified and unclassified documents, Vu-Graphs, recordings and other data." But most of the secret material presented in courses is "in the head" of the lecturer, Admiral Gravelly said.

The contract specifies that the association must comply with standard security regulations common in the military industry, such as verifying an applicant's clearance through the Defense Industrial Security Clearance Office. Admiral Gravelly said this particular requirement meant telephoning the clearance office's central bureau in Los Angeles.

A brochure describing fall courses says the association's objective is to "provide educational, patriotic and training programs designed to promote national and Free World preparedness." Most of the application blank on the last page is taken up by questions that must be certified by a Government Contracting Officer as well as a Security Officer. Otherwise it looks much like any ordinary, run-of-the-mill, secret combat technology tear-out form — MasterCard and American Express welcome, of course.